

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
 - TEXT CUT OFF AT TOP, BOTTOM OR SIDES
 - FADED TEXT
 - ILLEGIBLE TEXT
 - SKEWED/SLANTED IMAGES
 - COLORED PHOTOS
 - BLACK OR VERY BLACK AND WHITE DARK PHOTOS
-
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/678,207 | 09/20/2000 | John V. Skinner JR. | GEMS8081.029 | 6319 |

27061 7590 08/05/2004

ZIOLKOWSKI PATENT SOLUTIONS GROUP, LLC (GEMS)
14135 NORTH CEDARBURG ROAD
MEQUON, WI 53097

EXAMINER

CAO, DIEM K

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2126

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/678,207

Applicant(s)

SKINNER ET AL.

Examiner

Diem K Cao

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-37 is/are allowed.
- 6) ☒ Claim(s) 1,2,15-24 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 3-14 and 25-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-37 remain in the application.

Allowable Subject Matter

2. Claims 3-14, 25-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

3. Claims 34-37 are allowed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 15-19 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Davidson (U.S. 5,630,136).
6. **As to claim 1**, APA teaches (pages 3-4) integrating an X Window visualization toolkit (Xt Intrinsic based visualization and graphics toolkit) with a JAVA application (Java application or applet), providing a JAVA application thread that includes a call to an X Window

Art Unit: 2126

visualization toolkit (Java application requests a schedule camera position ... is rotated), and an X Window X event loop (X event loop).

7. However, APA does not explicitly teach a Java process thread that comprises an X Window X event loop, and suspending execution of the X event loop to prevent concurrency related data corruption while a call to the X Window visualization toolkit is made by the JAVA application thread. Davidson teaches a process thread that comprises an X Window X event loop (a thread to run the baton X_event loop is created; col. 8, line 51 – col. 9, line 3), and only one thread is permitted to access the resource when there are multiple thread require access to the resource (toolkits; col. 1, lines 23-34 and Of the various threads ... unsafe resource; col. 5, line 52 – col. 7, line 23). Although Davidson does not teach a Java thread, Davidson teaches a thread in the object-oriented environment (Because of its object-oriented nature; col. 4, line 66 – col. 5, line 11). It would have been obvious the object-oriented in Davidson system could be Java environment.

8. It would have been obvious to apply the teaching of Davidson to the system of APA because it provides a technique for serializing access to multithreading unsafe resource (summary of the invention).

9. **As to claim 15**, APA teaches the toolkit comprises at least one widget (These object components are typically referred to as Widgets; page 3, second paragraph).

Art Unit: 2126

10. **As to claim 16**, APA teaches the at least one widget comprises a visualization/graphics object (user interface features ... drawing areas; page 3, second paragraph).

11. **As to claim 17**, although APA does not teach the Java application comprises a Java applet, it would have been obvious to one of ordinary skill in the art at the time the invention was made that Java is used to create applet because applets are small in files size, cross-platform compatible, and highly secure, they are ideal for small Internet applications accessible from a browser.

12. **As to claim 18**, see rejection of claim 1 above. However, APA does not explicitly teach providing a plurality of JAVA application threads that each include a call to an X Window visualization toolkit or widget, selecting one of the plurality of application threads to execute and then suspending execution of the remainder of the plurality of application threads. It is well known in the art that a Java application is a multi-thread application, one of ordinary skill in the art would be able to modify the Java application to have multiple threads each makes a call to the X Window toolkit. Davidson teaches only one thread could access the resource, and the rest of threads are suspended (Of the various threads ... unsafe resource; col. 5, line 52 – col. 7, line 23).

13. **As to claim 19**, see rejection of claims 1 and 18 above.

Art Unit: 2126

14. **As to claim 31**, APA teaches the call to the X Window visualization toolkit or widget comprises a call to an X Window Intrinsics based toolkit or widget (Xt Intrinsic based visualization and graphics toolkit, Java application requests a schedule camera position ... is rotated; pages 3-4).

15. **As to claim 32**, APA teaches the X Window Intrinsics based toolkit comprises VTK or a toolkit based on VTK (X Window visualization ... VTK ... X Toolkit Intrinsics; pages 2-3).

16. **As to claim 33**, APA does not explicitly teach the call to the X Window visualization toolkit or widget is made using the JAVA Native Interface. It is well known in the art that Java application uses JNI to make call to native methods. It would have been obvious the call to the X Window toolkit is made using the JNI.

17. Claims 2 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA) in view of Davidson (U.S. 5,630,136) further in view of Lee (Adding External Input Sources to the X Toolkit Event Loop).

18. **As to claim 2**, APA does not teach the X event loop comprises an X Window file descriptor function that coordinates an X event loop blocking read that is used to suspend execution of the X event loop. Lee teaches the X Toolkit's XtAppAddInput () function adds file descriptor input handling (Unix File Descriptor Input; page 2). It would have been obvious to

Art Unit: 2126

one of ordinary skill in the art to apply the teaching of Lee to the system of APA because it would provide a method to add external input sources to the X Toolkit event loop.

19. **As to claim 20**, APA does not teach the X event loop performs a blocking read to suspend execution of the X event loop in step (c). Lee teaches the `XtAppAddInput()` function adds file descriptor input handling to the even loop by specify the file descriptor identifying the socket or pipe, the socket condition in which the application interested, and the callback function (Unix file descriptor input; page 2). It would have been obvious to apply the teaching of Lee to the system of APA because it provides a method to suspend a thread by condition.

20. **As to claim 21**, see rejection of claim 2 above.

21. **As to claim 22**, see rejection of claim 2 above.

22. **As to claim 23**, APA does not explicitly teach after step (b), an additional step comprising suspending execution of the one of the plurality of the application threads to allow the X event loop to finish processing any X event being processed by the X event loop before execution of the X even loop is suspended in step (c). APA teaches the X event loop makes call to the X Windows toolkit (also assume that the native ... dimensional scene; page 4), and Davidson teaches only one thread can access the toolkit (only the thread ... unsafe resource; col. 6, lines 25-37). It would have been obvious the application thread must be suspended while the X

Art Unit: 2126

event loop makes call to the toolkit because it provides a method for serializing access to multithreading resource.

23. As to claim 24, APA does not teach suspending execution of the one of the plurality of the application threads is accomplished by a blocking read that includes a read socket of the one of the plurality of application threads that receives a data element from a write socket of the X event loop. Lee teaches the XtAppAddInput() function adds file descriptor input handling to the even loop by specify the file descriptor identifying the socket or pipe, the socket condition in which the application interested, and the callback function (Unix file descriptor input; page 2). Also see rejection of claim 20 above.

Response to Arguments

24. Applicant's arguments filed 5-24-2004 have been fully considered but they are not persuasive.

25. In the remarks, Applicant argued in substance that (1) "Examiner ignored Applicant's remarks filed in response to the Office action dated June 9 2003 regarding the combination of APA and Davidson is insufficient to establish a prima facie case of obviousness", (2) Davidson's reference teaches away from the claimed invention because Davidson precludes the use of Java programming language because Davidson teaches "the baton processing 50 is executed on a computer and operating system that supports multithreading", and Java application is processed within a Java Virtual Machine and not within the operating system, (3) The claimed invention

Art Unit: 2126

removes the need for a client/server configuration wherein the APA and Davidson's reference use the client/server configuration, and (4) Examiner asserted that the APA teaches "a Java process thread that comprises an X Window X event loop".

26. Examiner respectfully traversed Applicant's remarks:

As to the point (1), examiner did not ignore the Applicant's remark, however, examiner found the arguments were not persuasive, therefore, the rejection was still maintain and answers to the remark could be found in the last Office action under the "Response to the Argument" section.

As to the point (2), examiner respectfully disagrees regarding Davidson precludes the use of Java programming language because Java application is converted to byte code which is compatible with all the computers and platforms. The Java application can execute on all computers as long as there is a Java Virtual Machine. Davidson teaches the application is written in C++ programming language, and Java syntax is based on the C++ syntax and very close to C and C++ programming languages. To run the Java application on the system of Davidson, one only needs to download the Java Virtual Machine, and the Java Virtual Machine runs on top of the computer operating system.

As to the point (3), the feature "remove the need of client/server configuration" were not in the claim, the claim only requires "a Java process thread that comprises an X window X event loop", which is taught by Davidson and obviousness of using Java programming language instead of C++. If Applicant finds the feature is important of the invention, the feature should be included in the claim's body, because reading the specification to the claim is improper.

Art Unit: 2126

As to the point (4), Examiner never asserted that the APA teaches “a Java process thread that comprises an X Window X event loop”, Applicant is directed to the rejection of claim 1 for further information.

Conclusion

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K Cao whose telephone number is (703) 305-5220. The examiner can normally be reached on Monday - Thursday, 9:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2126

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Diem Cao


MENG-AL TAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100